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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/664,920 | 09/22/2003 | Norihiko Aze | 243045US3CIP | 5127 |

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| EXAMINER | |
|---|---|
| GARBER, CHARLES D | |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2856 | |

DATE MAILED: 02/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/664,920 | AZE ET AL. | |
| | Examiner | Art Unit | |
| | Charles D. Garber | 2856 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *12 February 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-41* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *4-35 and 38-41* is/are allowed.

6)☒ Claim(s) *1-3,36 and 37* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *22 September 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *02/12/2004*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

## DETAILED ACTION

### *Specification*

The attempt to incorporate subject matter into this application by reference to German Industrial Standard, DIN 50359-1 in paragraph 0018 is improper because it is not known if the standard is available to the public, what parts of the standard are relevant to the terms "universal hardness" and "HU" within the claims, or if the standard is subject to frequent changes and alterations. Where possible, claims are to be complete in themselves. Incorporation by reference "is permitted only in exceptional circumstances where there is no practical way to define the invention in words and where it is more concise to incorporate by reference than duplicating a drawing or table into the claim. Incorporation by reference is a necessity doctrine, not for applicant's convenience." Ex pade Fressola, 27 USPQZd 1608, 1609 (Bd. Pat. App. & Inter. 1993) (citations omitted). In this case it is practical to include the essential text of the referenced document. See MPEP j 608.01(m) and 2173.05(s).

### *Claim Rejections - 35 USC § 112*

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-41 are rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure which is not enabling. Carrying out indentation by a "universal" method or to specific depths and relying upon specific hardness measurements ("HU" in tems of $N/mm^2$) without identifying any potentially variable characteristics of the indenter such

as the material, shape and size or the rate of force application is considered critical or essential to the practice of the invention, but not included in the claim(s) and is therefore not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976).

An application as filed must be complete in itself in order to comply with 35 U.S.C. 112. Though material may be incorporated by reference (Ex parte Schwarze, 151 USPQ 426 (Bd. App. 1966)) such material is limited to (1) a U.S. patent, (2) a U.S. patent application publication, or (3) a pending U.S. application. "Essential material" is defined as that which is necessary to (1) describe the claimed invention, (2) provide an enabling disclosure of the claimed invention, or (3) describe the best mode (35 U.S.C. 112). In this case the references contain specific methods and procedures essential to describing the practice of the instant invention.

In any application which is to issue as a U.S. patent, essential material may not be incorporated by reference to (1) patents or applications published by foreign countries or a regional patent office, **(2) non-patent publications**, (3) a U.S. patent or application which itself incorporates "essential material" by reference, or (4) a foreign application. (emphasis added). See MPEP 608.01(p). In this case, Applicant relies upon reference to German Industrial Standard, DIN 50359-1 in paragraph 0018 for details regarding methods and apparatus for carrying out a hardness test. The reference is a non-patent publication and may not be relied upon for such detail.

For purposes of further examination, Examiner will ignore the terms "universal", "HU" and specific hardness measurement values, ranges or indentation depths related

to the reference which is not incorporated. Where two specific indentation depths are claimed Examiner will assume them to be first and second predetermined depths only and consequent hardness values to be first and second predetermined hardnesses.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Sorenson et al. (US Patent 3,194,061).

Regarding claims 1 and 3, Sorenson discloses an instrument for measuring the hardness of the surface of a resilient roll. Roller 18 is a press roller which has a rubber surface. Applicant identifies a fixing apparatus as comprising a thermal fixing roller and press roller or thermal roller and fixing belt (paragraph 0006). Therefore, a press roller may be a member of a fixing apparatus and consequently Examiner considers the press roller 18 to be equivalent to a fixing member as in the instant invention. Sorenson carries out a hardness test with indicating means 11 in room defined by ceiling 21 and floor 15. The inherent temperature within the room is considered to be "room temperature" as in the instant invention. The means 11 identifies hard spots (column 2 lines 15-20) by "sudden increase in the reading of the gauge 52" which are considered defects (column 1 lines 10-40). Examiner considers rollers with hard spots to be equivalent to non-standard products and rollers without hard spots to be equivalent to

standard products as the term "standard" may be defined as a. An acknowledged measure of comparison for quantitative or qualitative value; a criterion. b. An object that under specified conditions defines, represents, or records the magnitude of a unit, according to The American Heritage Dictionary of the English Language. In this case, the qualitative measure of a roller that exhibits no sudden increases on the indicator is a desired standard object. All others are defective or non-standard.

As for claim 2, Examiner has not considered the limitation with respect to the depth of the indentation relative to the thickness of a surface layer because absent details on specifically an indentation test may be carried out (as discussed above with respect to lack of enablement) the depth with respect to surface thickness is meaningless and cannot be properly examined with respect to prior art. The claim is not considered to be further limiting.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 36 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over admitted prior art (Admission) in view of Fukuda et al. (US Patent Application 2003/016323 A1).

Admission discloses heating roller 17, parallel fixing roller 16 with fixing belt 18 between them, and press roller 19 contacting the surface of the belt as shown in figure 21 (see paragraph 0008). Admission lacks carrying out a hardness test of the belt surface at room temperature.

Fukuda discloses fixing belt teaching evaluation of the fixing belt using pencil hardness evaluation of the surface of the base-surface modifying layer (paragraphs 00429-0437, 0478 and 0479).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to test a belt surface in order to determine hardness having "excellent adhesion durability of a surface layer at fixing treatment in image formation as well as excellent glossiness."

While Fukuda does not expressly teach the belts were tested at room temperature It would have been obvious to one having ordinary skill in the art at the time the invention was made to test them at room temperature as this would normally be the temperature at which belts are fabricated and there would be no need to raise the room temperature simply to test for hardness.

***Allowable Subject Matter***

Claims 4, 6, 8, 9, 10, 12, 18, 19, 21-23, 27, 28, 30-32, 38-41 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 1st paragraph, set forth in this Office action.

Claims 5, 7, 11-17, 20, 24, 26, 29, 33-35 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 1st paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

The prior art does not disclose or suggest performing a hardness test of a thermal fixing roller or fixing belt with a surface coating or layer with an indenter at two separate predetermined depths with two separate predetermined threshold results used to qualify the belt.

ASTM Standard D 1415 – 88 titled "Standard Test Method for Rubber Property-International Hardness" teaches testing hardness based on two indentation depths taken at minor and major loads. However, the method only uses differences in depth and force to determine rubber properties, not in the absolute values at either depth or load as in the instant invention.

Allowance however presumes that the German Industrial Standard reference Applicants have attempted to incorporate as discussed above is known, enabling and the relevant portions are included in the body of the specification or claims by amendment.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles D. Garber whose telephone number is (571) 272-2194. The examiner can normally be reached on 6:30 a.m. to 3:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams can be reached on (571) 272-2208. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

cdg

CHARLES GARBER
PRIMARY EXAMINER